AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1-35. (Cancelled)

36. (Currently Amended) A bacterial artificial chromosome (BAC) ~~recombinant vector~~ containing bacterial nucleic acid sequences and an infectious herpes virus genomic sequence larger than 100 kb ~~and all or a portion of a bacterial artificial chromosome (BAC)~~, wherein ~~said all or a portion of~~ the BAC enables replication of the infectious herpes virus genomic sequence ~~recombinant vector~~ in a host cell.

37. (Currently Amended) The ~~recombinant vector~~ BAC of claim 36, wherein the infectious ~~viral~~ herpes virus genomic sequence is larger than 200 kb.

38.-39. (Cancelled)

40. (Currently Amended) The ~~recombinant vector~~ BAC of claim 36, wherein said herpes virus is a beta herpes virus.

41. (Currently Amended) The ~~recombinant vector~~ BAC of claim 40, wherein said beta herpes virus is a human cytomegalovirus.

42. (Currently Amended) The ~~recombinant vector~~ BAC of claim 40, wherein said beta herpes virus is a mouse cytomegalovirus.

43. (Currently Amended) The ~~recombinant vector~~ BAC of claim 36, wherein said herpes virus is a gamma herpes virus.

44. (Currently Amended) The ~~recombinant vector~~ BAC of claim 43, wherein said gamma herpes virus is murine gamma herpes virus 68 (MHV 68).

45. (Currently Amended) The ~~recombinant vector~~ BAC of claim 36, wherein ~~said all or a portion of the BAC is~~ the bacterial nucleic acid sequences are flanked by nucleotide sequences which are identical to each other and which, upon homologous recombination,

enable excision of ~~said all or a portion of the BAC from the recombinant vector~~ the bacterial nucleic acid sequences.

46. (Currently Amended) The ~~recombinant vector~~ BAC of claim 36, wherein ~~said all or a portion of the BAC is~~ the bacterial nucleic acid sequences are flanked by (i) recognition sequences for sequence-specific recombinases, (ii) unique restriction enzyme sites, or (iii) recognition sequences for sequence-specific recombinases and unique restriction enzyme sites.

47. (Currently Amended) The ~~recombinant vector~~ BAC of claim 46, wherein the recognition sequences are loxP sites.

48. (Currently Amended) The ~~recombinant vector~~ BAC of claim 36, which further contains (i) a selection gene, (ii) a marker gene, or (iii) a selection gene and a marker gene.

49. (Currently Amended) The ~~recombinant vector~~ BAC of claim 45, which further contains (i) a selection gene, (ii) a marker gene, or (iii) a selection gene and a marker gene.

50. (Currently Amended) The ~~recombinant vector~~ BAC of claim 46, which further contains (i) a selection gene, (ii) a marker gene, or (iii) a selection gene and a marker gene.

51. (Currently Amended) A cell containing ~~a recombinant vector~~ the BAC of claim 36.

52. (Currently Amended) A cell containing ~~a recombinant vector~~ the BAC of claim 45.

53. (Currently Amended) A cell containing ~~a recombinant vector~~ the BAC of claim 46.

54. (Currently Amended) A cell containing ~~a recombinant vector~~ the BAC of claim 48.

55. (Currently Amended) A cell containing ~~a recombinant vector~~ the BAC of claim 49.

56. (Currently Amended) A cell containing ~~a recombinant vector~~ the BAC of claim 50.

57. (Currently Amended) A method of producing ~~a recombinant vector~~ the BAC of claim 36, which method comprises:

(a) introducing bacterial nucleic acid sequences into a host cell containing infectious ~~viral~~ herpes virus genomic sequences ~~all or a portion of a BAC, wherein said all or a portion of the BAC enables replication in the host cell of a recombinant vector of which it is comprised~~, and

(b) recombining ~~all or a portion of the BAC, as has been introduced into the host cell,~~ the bacterial nucleic acid sequences with the infectious ~~viral~~ herpes virus genomic sequences,

whereupon the ~~recombinant vector~~ BAC is obtained.

58. (Original) The method of claim 57, wherein step (b) is carried out by homologous recombination.

59. (Original) The method of claim 57, wherein said host cell is a eukaryotic cell.

60. (Original) The method of claim 59, wherein said eukaryotic cell is a mammalian cell.

61. (Original) The method of claim 60, wherein said mammalian cell is a primary fibroblast, a human foreskin fibroblast (HFF), or a mouse embryonic fibroblast.

62. (Original) The method of claim 61, wherein said primary fibroblast is an NIH3T3 fibroblast.

63. (Currently Amended) The method of claim 57, wherein said ~~BAC is~~ bacterial nucleic acid sequences are introduced into the host cell by calcium phosphate precipitation, lipofection or electroporation.

64. (Currently Amended) The method of claim 57, wherein said ~~BAC is~~ bacterial nucleic acid sequences are introduced into the host cell by a viral vector.

65. (Original) The method of claim 57, wherein said host cell is a bacterial organism.

66. (Original) The method of claim 65, wherein said bacterial organism is *Escherichia coli*.

67. (Currently Amended) A method of mutagenizing ~~an~~ the infectious ~~viral~~ herpes virus genomic sequence in ~~a recombinant vector~~ the BAC of claim 36, which method comprises: (a) introducing the ~~recombinant vector~~ BAC of claim 36 into a bacterial host cell, (b) exposing the BAC to ~~which contains~~ mutagenizing DNA molecules, ~~and mutagenizing~~ whereupon the infectious ~~viral~~ herpes virus genomic sequence in the ~~recombinant vector~~ BAC is mutagenized.

68. (Currently Amended) The method of claim 67, wherein step (b) is carried out by homologous recombination between the ~~recombinant vector~~ BAC and the mutagenizing DNA molecules.

69. (Currently Amended) The method of claim 68, wherein there is a mutant allele in the mutagenizing DNA molecules and ~~the~~ homologous recombination is carried out between the ~~recombinant vector~~ infectious herpes virus genomic sequence and the mutant allele.

70. (Previously Presented) The method of claim 67, wherein there is a transposon in the mutagenizing DNA molecules and step (b) is carried out by the transposon.

71.-72. (Cancelled)

73. (New) An isolated or purified infectious herpes virus genomic sequence produced by the method of claim 67, wherein the infectious herpes virus genomic sequence comprises a mutagenized viral genomic sequence larger than 100 kb.

74. (New) The isolated or purified infectious herpes virus genomic sequence of claim 73, wherein the infectious herpes virus genomic sequence comprises a mutagenized viral genomic sequence larger than 200 kb.